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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/625,841	07/23/2003	David C. Sudolcan	L-0170.79	8929

7590 12/30/2005

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EXAMINER	
THOMPSON, JEWEL VERGIE	
ART UNIT	**PAPER NUMBER**
2855	

DATE MAILED: 12/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/625,841	SUDOLCAN ET AL.	
	Examiner	Art Unit	
	Jewel V. Thompson	2855	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 October 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) *22-30* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10,12 and 21* is/are rejected.

7)☒ Claim(s) *11 and 14-20* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-10, 12 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Miller, Jr. et al (4,532,811).

Regarding claim 1, Miller et al teaches a sensor for determining flow rate of a fluid through a volume, comprising: a thermistor (16) at least partially inserted into the volume (col. 4, lines 37-40); and a sensor circuit (100) adapted to cycle the thermistor between a zero-power mode and a self-heated mode (col. 8, lines 1-10).

Regarding claims 2 and 21, Miller et al teaches the sensor circuit comprises a configurable power controller adapted to cycle the thermistor between a zero-power mode and a self-heated mode (col. 8, lines 1-10).

Regarding claim 3, Miller et al teaches the configurable power controller comprises a variable resistance (124); and a switch (134) in association with the variable resistance, the switch being adapted to cycle the variable resistance between a first value and a second value, the first value being selected to operate the thermistor in the zero-power mode and the second value being selected to operate the thermistor in the self-heated mode (fig. 3 and col.8, lines 21-42).

Regarding claim 4, Miller et al teaches the thermistor is in series with the variable resistance between a first side of a power source and a second side of a power source (col. 8, lines 32-42).

Regarding claim 5, Miller et al teaches the thermistor is arranged in series with the variable resistance at the high side of the power source (col. 8, lines 32-42).

Regarding claim 6, Miller et al teaches the thermistor is arranged in series with the variable resistance at the low side of the power source (col. 8, lines 32-42).

Regarding claim 7, Miller teaches a conversion circuit for use in measuring the voltage drop across the thermistor (col. 6, lines 60-68-col. 7, lines 1-7).

Regarding claim 8, Miller et al teaches the conversion circuit comprises a first channel for measuring the voltage drop across the thermistor when the thermistor is in its zero-power mode and a second channel for measuring the voltage drop across the thermistor when the thermistor is in its self-heated mode (fig. 3).

Regarding claim 9, Miller et al teaches each channel comprises an isolation amplifier (fig. 3).

Regarding claim 10, Miller et al teaches the second channel comprises a voltage divider for scaling down the voltage drop across the thermistor (col. 6, lines 60-68-col. 7, lines 1-7).

Regarding claim 12, Miller et al teaches the conversion circuit comprises a micro-controller (132) adapted to convert the voltage drop across the thermistor in the zero-power mode and the voltage drop across the thermistor in the self-heated mode to the flow rate of the fluid through the volume (col. 8, lines 32-39 and col. 3, lines 34-36).

Allowable Subject Matter

2. Claims 11, and 13-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

3. Applicant's arguments with respect to claims 1-10, 12 and 21 have been considered but are moot in view of the new ground(s) of rejection.

Applicant argues that the Weber does not teach a sensor circuit adapted to cycle a thermistor between zero-power mode and a self-heated mode.

Examiner agrees. However, a newly sited reference does show a sensor circuit adapted to cycle a thermistor between zero-power mode and a self-heated mode, see Office Action.

Applicant argues that Weber does not disclose a switch that facilitates the cycling of a thermistor from a zero-power mode to a self-heated mode

Examiner agrees. However, a newly sited reference does show a switch that facilitates the cycling of a thermistor from a zero-power mode to a self-heated mode, see Office Action.

It is noted that the restriction requirement dated April 19, 2005 was responded by the Applicant with traverse and not without traverse as asserted in the Office Action dated July 29, 2005

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

5,551,283 Manaka et al teaches an atmosphere measuring device and flow sensor.

4,739,771 Manwaring teaches a thermal apparatus for measuring a fluid

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jewel V. Thompson whose telephone number is 571-272-2189. The examiner can normally be reached on 7-4:30, off alternate Mondays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jewel Thompson

Jvt

December 27, 2005